Application No. 10/694,494

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings of claims in the application:

1.   (Currently Amended)   In a digital imaging system receiving document images, a method for optimizing a rendition thereof, comprising:

receiving a document image representation in a form suitable for processing; and,

processing the document image with selective dilation in an image processing system to selectively soften shape edges therein in order to improve the printing of such of the document image.

2.   (Original)   The digital imaging system of claim 1, wherein the image processing system includes a digital front end.

3.   (Original)   The digital imaging system of claim 1, wherein the processing includes morphologically manipulating the document image.

4.   (Original)   The digital imaging system of claim 3, wherein morphological manipulation comprises:

trapping the objects in the document image;
generating a tag for the trap results; and
rendering according to the tags those trap results.

-2-

Application No. 10/694,494

5.   (Original)   The digital imaging system of claim 4, wherein rendering comprises:

dithering the trap results.

6. (Original) The digital imaging system of claim 5, wherein the dithering is of a higher frequency type than that employed by the digital imaging system to the remainder of the image.

7. (Original) The digital imaging system of claim 5, wherein the dithering is of a dispersed type.

8. (Original) The digital imaging system of claim 4, wherein the dithering is of a stochastic type.

9.   (Original)   The digital imaging system of claim 1, wherein processing to selectively soften shape edges comprises:

using a convolution with low pass filter.

10.   (Original)   The digital imaging system of claim 1, wherein processing to selectively soften shape edges comprises:

using values in a look up table.

11.   (Original)   The digital imaging system of claim 1, wherein processing to selectively soften shape edges means providing a gradient sloping down of pixel values relative to the edge pixel values.

-3-

Application No. 10/694,494

12.   (Original)   The digital imaging system of claim 1, wherein processing to selectively soften shape edges means providing a gradient sloping up of pixel values relative to the edge pixel values.

13.   (Original)   The digital imaging system of claim 1, wherein processing to selectively soften shape edges means providing a lowering of pixel values relative to the edge pixel values.

14.   (Original)   The digital imaging system of claim 1, wherein processing to selectively soften shape edges means providing higher pixel values relative to the edge pixel values.

15.   (Original)   The digital imaging system of claim 3, wherein morphological manipulation comprises:

    storing the document image in a first memory space;
    replicating the document image as a working image in a second memory space;
    selectively dilating the working image to produce a first resultant working image;
    isolating the selectively dilated areas in the first resultant working image to produce a second resultant working image;
    halftoning the isolated selectively dilated areas in the second resultant working image; and,
    performing an XOR operation of the second resultant working image with the document image in the first memory space, to thus produce selectively softened edges in the stored document image.

-4-

Application No. 10/694,494

16. (New) In a digital imaging system receiving document images, a method for optimizing a rendition thereof in an image marking process, comprising:

receiving a document image representation in a form suitable for processing;

processing the document image with morphological manipulation in an image processing system to selectively soften shape edges therein in order to improve the printing of the document image, where the morphological manipulation comprises:

trapping objects in the document image;

generating a tag for the trap results; and

rendering according to the tags those trap results.

17. (New) The digital imaging system of claim 16, wherein rendering comprises:

dithering the trap results.

18. (New) The digital imaging system of claim 16, wherein the selectively softened shape edges are only those shape edges which are perpendicular to the fast scan direction in the image marking process.

19. (New) The digital imaging system of claim 16, wherein the selectively softened shape edges are only those shape edges which are perpendicular to the slow scan direction in the image marking process.

Application No. 10/694,494

20. (New) In a digital imaging system receiving document images, a method for optimizing a rendition thereof in an image marking process, comprising:

receiving a document image representation in a form suitable for processing;

processing the document image with morphological manipulation in an image processing system to selectively soften shape edges therein in order to improve the printing of the document image, where the morphological manipulation comprises:

storing the document image in a first memory space;

replicating the document image as a working image in a second memory space;

selectively dilating the working image to produce a first resultant working image;

isolating the selectively dilated areas in the first resultant working image to produce a second resultant working image;

halftoning the isolated selectively dilated areas in the second resultant working image; and,

performing an XOR operation of the second resultant working image with the document image in the first memory space, to thus produce selectively softened edges in the stored document image.

21. (New) The digital imaging system of claim 20, wherein the selectively softened shape edges are only those shape edges which are perpendicular to the fast scan direction in the image marking process.

22. (New) The digital imaging system of claim 20, wherein the selectively softened shape edges are only those shape edges which are perpendicular to the slow scan direction in the image marking process.

23. (New) The digital imaging system of claim 1, wherein the selectively dilated and softened shape edges are only those shape edges which are perpendicular to the fast scan direction.

-6-

Application No. 10/694,494

24. (New) The digital imaging system of claim 1, wherein the selectively dilated and softened shape edges are only those shape edges which are perpendicular to the slow scan direction.

-7-